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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,075	12/06/2001	Samir S. Soliman	PA823C1	1973
23696	7590	03/25/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			HARPER, KEVIN C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

✓

<b>Office Action Summary</b>	<b>Application No.</b> 10/006,075	<b>Applicant(s)</b> SOLIMAN, SAMIR S.	
	<b>Examiner</b> Kevin C. Harper	<b>Art Unit</b> 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-2001</u> . | 6) <input type="checkbox"/> Other: _____  |

***Priority***

This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading, "This is a continuation of Application No. 09/327,103, now US Patent 6,356,531, filed June 7, 1999" should be entered following the title of the invention or as the first sentence of the specification.

***Claim Objections***

1. Claims 1-12 are objected to because "frequency reuse" should be --frequency reuse efficiency-- as described in the specification on page 1, line 37 through page 2, line 1 (note: frequency reuse as known in the art would be "1" in the present invention because the same frequency band is used in every cell. See also page 7, equation 7 and page 8, lines 7-9).
2. Claims 1-12 are objected to because in the independent claims, "loading of the system" and "frequency reuse of the system" should be --loading in the system-- and --frequency reuse efficiency in the system--, respectively. The loading of a cell/sector, not the entire system, is determined by the frequency reuse efficiency of only a cell/sector (page 8, lines 7-9 and 23-25).
3. Claims 1-11 are objected to because "comprising the steps of:" should be --comprising:-- in independent claims 1 and 7.
4. Claim 2 is objected to because "determining the frequency reuse of the system" should be --determining frequency reuse in the system--.
5. Claims 3-4 and 9-10 are objected to because "The method of" should be --The apparatus of--.
6. Claim 8 is objected to because it depends upon itself.

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7. Claim 9 is objected to because a word is missing between "wherein the" and "is used".
8. Claim 11 is objected to because "the system" should be "a system".

Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 and 7-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 and 14-15 of U.S. Patent No. 6,365,531 in view of Ayyagari et al. (US 6,278,701).

9. Regarding claims 1 and 7-12, claims 1 and 14-15 of the '531 patent recite a method or system for monitoring the load on a CDMA communication system comprising providing a value of frequency reuse efficiency and determining system loading according to the frequency reuse efficiency. However, claims 1 and 14-15 of the '531 patent also recites additional limitations. In removing the additional limitations, the scope is merely broadened by eliminating functions from the claims. It has been held that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson,

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136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 365 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to not have recite the recursive limitations in the '531 patent. Further, claims 1 and 14-15 of the '531 patent does not recite a digital signal processing apparatus comprising receive circuitry and a processor coupled to the receive circuitry, capable of executing commands to determine loading. Ayyagari discloses a digital signal processing apparatus (item 20) to estimate loading in a spread spectrum wireless communication system (col. 13, lines 47-56) comprising receive circuitry (fig. 1) and a processor (item 24) coupled to the receive circuitry and capable of executing commands and data to estimate loading of the system (col. 4, lines 57-60; col. 13, lines 46-50; note: the capacity of the system in comparison to the current utilization is determined when admitting a new user) to determine admission of calls based on loading. A call is rejected if the loading is too high and accepted if it is low (col. 13, lines 45-50; fig. 8b, steps 142, 146 and 154), and the new call is rescheduled if the loading is above a certain threshold (fig. 8B, steps, 154-156 and 148; col. 14, lines 52-53). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to recite a digital processing apparatus for performing the method of the '531 patent in order to provide a device for reducing overload conditions in a wireless network.

10. Regarding claim 2, the limitation is recited in step c in claim 1 of the '531 patent.
11. Regarding claim 3, the limitation is recited in step e in claim 1 of the '531 patent.
12. Regarding claim 4, the limitation is recited in claims 3-5 of the '531 patent.
13. Regarding claim 5, the limitation is recited in claim 8 of the '531 patent.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ayyagari et al. (US 6,278,701).

14. Regarding claims 1, 7, 10 and 12, Ayyagari discloses a digital signal processing apparatus (item 20) to estimate loading in a spread spectrum wireless communication system (col. 13, lines 47-56) comprising receive circuitry (fig. 1), and a processor (item 24) coupled to the receive circuitry and capable of executing commands and data to estimate loading of the system (col. 4, lines 57-60) by determining frequency reuse efficiency in the system (col. 13, lines 50-53, col. 6, lines 25-35, 48-51 and 63-64; intercell interference is determined) and determining loading in the system as a function of the frequency reuse (col. 13, lines 46-50; note: the capacity of the system in comparison to the current utilization is determined when admitting a new user) to determine admission of calls based on loading.

15. Regarding claim 2, the frequency uses efficiency is determined by power associated with voice activity (col. 6, lines 32-33).

16. Regarding claim 3, the frequency reuse is recalculated (col. 13, lines 46-55; figs. 7-8B).

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17. Regarding claims 4-6, the processor is capable of calculating frequency reuse efficiency and loading as claimed (col. 13, lines 50-53 and col. 6, lines 25-35, 48-51 and 63-64; MPEP 2114).

18. Regarding claims 8, a call is rejected if the loading is too high and accepted if it is low (col. 13, lines 45-50; fig. 8b, steps 142, 146 and 154).

19. Regarding claim 9, the new call is rescheduled if the loading is above a certain threshold (fig. 8B, steps, 154-156 and 148; col. 14, lines 52-53).

20. Regarding claim 11, Ayyagari discloses a computer readable medium (fig. 2, item 22; col. 4, lines 57-63) for storing a first set of instructions to determine frequency reuse efficiency in a system (col. 13, lines 50-53; col. 6, lines 25-25, 48-51 and 63.64), a second set of instructions for determining loading in the system (col. 13, lines 46-50) and a third set of instructions for determining admission of new calls (col. 13, lines 44-46).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:30 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the Patent Office is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see [portal.uspto.gov](http://portal.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin C. Harper

March 14, 2005

*Seema S. Rao*  
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